

REMARKS

The Official Action mailed February 25, 2005, has been received and its contents carefully noted. This response is filed within three months of the mailing date of the Official Action and therefore is believed to be timely without extension of time. Accordingly, the Applicants respectfully submit that this response is being timely filed.

The Applicants note with appreciation the consideration of the Information Disclosure Statements filed on November 22, 2000, October 20, 2003, and November 8, 2004.

Claims 3, 4, 7, 8, 11, 12, 16, 17, 20, 21, 25, 26, 29, 30, 34, 35, 38, 39, 43, 44, 47, 48, 52, 53, 56, 57, 61, 62, 65, 66, 70, 71, 74, 75, 77-100, 108-114, 116, 118, 120 and 122 are pending in the present application. Dependent claims 11, 12, 16, 17, 20, 21, 25, 26, 29, 30, 34, 35, 38, 39, 43, 44, 47, 48, 52, 53, 56, 57, 61, 62, 65, 66, 70, 71, 74, 75, 85-87 and 94-96 have been withdrawn from consideration by the Examiner. Accordingly, claims 3, 4, 7, 8, 77-84, 88-93, 97-100, 108-114, 116, 118, 120 and 122 are currently elected, of which claims 3, 4, 7, 8, 77-79 and 97-100 are independent. The independent claims have been amended to better recite the features of the present invention. For the reasons set forth in detail below, all claims are believed to be in condition for allowance. Favorable reconsideration is requested.

Paragraph 3 of the Official Action rejects claims 3, 4, 7, 8, 77-79, 97-100, 108-114, 116, 118, 120 and 122 as obvious based on the combination of U.S. Patent No. 6,195,143 to Ogawa, U.S. Patent No. 5,831,710 to Colgan et al., and JP 10-096955 to Seiki et al. The Applicants respectfully submit that a *prima facie* case of obviousness cannot be maintained against the independent claims of the present application, as amended.

As stated in MPEP §§ 2142-2143.01, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference

teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

The prior art, either alone or in combination, does not teach or suggest all the features of the independent claims, as amended. Independent claims 3, 4, 77, 97 and 98 have been amended to recite that gap holding members are selectively formed over contact holes in which each of a plurality of pixel electrodes is connected with a wiring connected with a thin film transistor. Independent claims 7, 78, 79 and 99 have been amended to recite that one of a plurality of gap holding members is selectively formed over a contact hole in which a pixel electrode is connected with a wiring connected with a thin film transistor. Independent claims 8 and 100 have been amended to recite that gap holding members are selectively formed over contact holes in which each of a plurality of pixel electrodes is connected with a wiring connected with one of a plurality of thin film transistors. For the reasons provided below, Ogawa, Colgan and Seiki, either alone or in combination, do not teach or suggest the above-referenced features of the present invention.

The Official Action concedes that Ogawa does not teach gap holding members (page 3, Paper No. 20050208). The Official Action relies on Colgan for curing the deficiency in Ogawa and asserts that Colgan teaches "gap-holding members (24) ...

formed by etching an insulating material" (Id.). Also, the Official Action concedes that "[n]either Ogawa nor Colgan disclose that the gap holding members are selectively formed over contact holes" (page 4, Id.). The Official Action relies on Seiki for curing the deficiencies in Ogawa and Colgan and asserts that Seiki teaches that "column-like spacers (26) (i.e., gap holding members) are formed over the contact holes (25) where the plurality of pixel electrodes (23) are connected" (Id.).

In response to the "Examiner's response to argument No. 1" (pages 8-9, Id.), the Applicants have deleted "formed on the first substrate" from claims 3, 4, 7, 8, 77-79 and 97-100, so these claims now recite "a plurality of gap holding members formed by etching an insulating film." The Applicants respectfully submit that the claims are clear and definite as amended.

With respect to the "Examiner's response to argument No. 2", the Official Action asserts that "[c]onnection of pixel electrodes to thin film transistors with wirings is inherent in liquid crystal display technology" (page 9, Id.). In response, the Applicants have amended independent claims 3, 4, 7, 8, 77-79 and 97-100 as noted in detail above in order to clarify the meaning of the claims. The Applicants respectfully submit that the amended independent claims distinguish the contact hole of the present invention from that of Seiki. For example, it is submitted that "one of the gap holding members is selectively formed over a contact hole in which the pixel electrode is connected with a wiring connected with the thin film transistor" means that the gap holding member is formed over a contact hole and, in the contact hole, the pixel electrode is connected with a wiring which is connected with the thin film transistor. On the other hand, in an "auxiliary part," Seiki appears to teach that a spacer 26 is provided in a contact hole 25 and, in the contact hole 25, a pixel electrode 23 is connected with an electrode 24 for auxiliary capacity (Drawing 4, which appears to correspond with line B-B in Drawing 2). In another part of the TFT, Seiki appears to teach a contact hole 21 in which a wiring 14 is connected with the pixel electrode 23 and is connected with a thin film transistor (Drawing 3, which appears to correspond with line A-A in Drawing 2). Although spacer

26 is provided in a contact hole 25, the contact hole 25 is not a contact hole in which a pixel electrode is connected with a wiring connected with a thin film transistor. Although Seiki appears to teach a contact hole 21 in which a wiring 14 is connected with the pixel electrode 23 and is connected with a thin film transistor, Seiki does not teach or suggest a spacer formed over the contact hole 21. Therefore, Seiki does not teach or suggest that gap holding members are selectively formed over contact holes in which each of a plurality of pixel electrodes is connected with a wiring connected with a thin film transistor. As such, Seiki does not cure the deficiencies in Ogawa and Colgan.

Since Ogawa, Colgan and Seiki do not teach or suggest all the claim limitations, a *prima facie* case of obviousness cannot be maintained. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) are in order and respectfully requested.

Paragraph 4 of the Official Action rejects claims 80 and 81 as obvious based on the combination of Ogawa, Colgan, Seiki and U.S. Patent No. 5,982,471 to Hirakata et al. Hirakata does not cure the deficiencies in Ogawa, Colgan and Seiki. The Official Action asserts that Hirakata discloses the details of a TFT and a plurality of gap holding members provided over contact portions (pages 6-7, Paper No. 20050208). However, the spacer 402 of Hirakata is formed by dispersing onto a substrate (see column 11, lines 23-26). Therefore, the Applicants respectfully submit that even if proper motivation were found to combine Ogawa, Colgan, Seiki and Hirakata, the alleged combination still would not teach or suggest that "gap holding members are selectively formed over contact holes in which each of the plurality of pixel electrodes is connected with a wiring connected with a thin film transistor." That is, a random dispersal is not a selective formation. Since Ogawa, Colgan, Seiki and Hirakata do not teach or suggest all the claim limitations, a *prima facie* case of obviousness cannot be maintained. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) are in order and respectfully requested.

Paragraph 5 of the Official Action rejects claims 82-84 and 88-93 as obvious based on the combination of Ogawa, Colgan, Seiki and U.S. Patent No. 5,739,882 to Shimuzu et al. Shimuzu does not cure the deficiencies in Ogawa, Colgan and Seiki. The Official Action relies on Shimuzu to allegedly teach that gap holding members are made from epoxy resin or UV curable resin (page 7, Paper No. 20050208). However, Ogawa, Colgan, Seiki and Shimuzu, either alone or in combination, do not teach or suggest that gap holding members are selectively formed over contact holes in which each of a plurality of pixel electrodes is connected with a wiring connected with a thin film transistor. Since Ogawa, Colgan, Seiki and Shimuzu do not teach or suggest all the claim limitations, a *prima facie* case of obviousness cannot be maintained. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) are in order and respectfully requested.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,



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